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(54) Message Transmission Method

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## SPECIFICATION

### 1. Title of the Invention

Message Transmission Method

### 2. Claims

A message transmission method wherein:

when a first dial number is received from a caller, a first transmission is performed whereby a message that is recorded in advance is sent to the caller;  
then, said caller is instructed to send a second dial number; and  
the second dial number that is sent from said caller is used to transfer communication to a second callee to enable a second communication between said caller and said second callee.

### 3. Detailed Description of the Invention

The present invention relates to a message transmission method that enhances the effects of the transmission of advertisement messages by using telephone communications as, for example, an advertisement medium for the transmission of advertisement messages.

#### Prior Art

There has been examples in the prior art for the use of telephone communications as a medium for the transmission of advertisement messages. Examples include telephone services that provide accurate time, weather forecasts, news and airline flight time information. With these examples, a recording/reproducing apparatus where advertisement messages are recorded in advance is connected in parallel to a telephone set so that when a caller dials the number of the telephone set, the recording/reproducing apparatus automatically reproduces advertisement messages which are then transmitted to the caller.

With this method, however, the efficacy of the messages that are transmitted is affected by the substance of the advertisement message. The inherent advantage of a telephone communication of providing a bidirectional communication is not used, and the potential efficacy of telephone communication as an advertisement medium is not fully used.

#### Summary of the Invention

The present invention eliminates the aforesaid shortcoming of the message transmission methods of the prior art and provides a method for the use of telephone communications as an effective means of transmitting advertisement messages.

According to the present invention, an advertisement message is transmitted before the start of the intended telephone communication. The intended telephone communication takes place after the transmission of the advertisement message. To explain, the caller is made to dial a first dial number. At the destination of said first dial, a message, for example, an advertisement message is recorded in advance, and this message is transmitted to the caller, thus executing a first communication. The caller is then instructed to dial a second dial number. When the caller dials the second dial number, the communication is transferred to a callee as dictated by said second dial number, thus enabling a second communication, this time between said caller and said second callee. In exchange for the delivery of the aforesaid pre-recorded message to the caller, the entity that provided the advertisement message may be charged with either a part or whole of the charges associated with said communications.

#### First Embodiment

Before providing a detailed description of the invention, the operation of the message transmission method is briefly described first.

FIG. 1 shows an embodiment that uses an attachment that is provided to a telephone set. 1, 2 and 3 are telephone sets; 4 is the attachment; and 5 is a switch. Telephone set 3 and attachment 4 are installed at the premises of the entity who desires to provide an advertisement message. Assume that a caller at telephone 1 desires to communicate with telephone 2. In this case, the caller uses telephone 1 to first dial the telephone number of telephone 3. Switch 5 uses the telephone number to connect telephone 1 to attachment 4 of telephone 3, thus allowing a communication to take place between the two. Attachment 4 then transmits the pre-recorded advertisement message to telephone 1, thus executing a first communication. When the first communication ends, attachment 4 delivers an instruction, for example, in a voice signal to the caller to dial the telephone number for telephone 2. When the caller follows this instruction and dials the telephone number for telephone 2 from telephone 1, attachment 4 detects this number. The attachment then uses an automatic dialing function that it has to activate switch 5 and transmits the telephone number of telephone 2 to switch 5. Switch 5 then uses the telephone number to connect attachment 4 and telephone 2. When attachment 4 detects that the connection has been made, it immediately uses a transfer connection function that it has to transfer telephone 1 to telephone 2, thus allowing the caller at telephone 1 to communicate with telephone 2 as originally intended.

If a contract is in place in advance between telephone 3 and switch 5 that a part or whole of the charges associated with the communication between telephone 1 and telephone 3 and between telephone 3 and telephone 2 will be charged to telephone 3, the caller at telephone 1 can, in exchange for listening to the advertisement message from telephone 3 prior to the start of the

communication with telephone 2, be charged a lesser fee for the communication with telephone 2 than would be the case if the caller had not listened to the advertisement message. This would be advantageous for the caller since the original purpose of communicating with telephone 2 is achieved [for less charge]. The merit for the entity providing the advertisement message is that it receives the effects of the delivery of the advertisement message in exchange for hearing a part or the whole of the normal fees that would have been charged for the communication between telephone 1 and telephone 2 in the absence of the delivery of the advertisement message.

## Embodiment 2

FIG. 2 shows an embodiment that uses a trunk apparatus of a switch. 1 and 2 are telephone sets; 5 is a switch; and 6 is a trunk apparatus that is connected to switch 5 for practicing the method according to the present invention. The entity that provides the advertisement message enters a contract in advance with switch 5 for the use of trunk apparatus 6 and has pre-recorded advertisement messages stored in trunk apparatus 6. Assume that the caller at telephone 1 desires to communicate with telephone 2. First, the caller uses telephone 1 to dial a predetermined number that specifies trunk apparatus 6. Switch 5 operates to connect telephone 1 to trunk apparatus 6. Trunk apparatus 6 then delivers a pre-recorded advertisement message to telephone 1 where the caller is located. When the delivery of the message is completed, an instruction is issued, for example, as a voice signal, to dial the number of telephone 2. When the caller receives this instruction and dials the number of telephone 2 from telephone 1, switch 5 uses this number to connect telephone 1 and telephone 2.

This allows telephone 1 to communicate with telephone 2 as originally intended. If a contract is in place in advance between switch 5 and the entity providing the message that a part or whole of the charges associated with communications that use trunk apparatus 6 will be charged to the entity providing the message, the caller at telephone 1 can, in exchange for listening to a advertisement message prior to the start of the originally intended communication, be charged less fee for the communication with telephone 2. This would be advantageous for the caller since the original purpose of communicating with telephone 2 is achieved [for less charge]. The merit for the entity providing the advertisement message is the same as with the embodiment shown in FIG. 1 in that it receives the effects of the delivery of the advertisement message in exchange for hearing a part or the whole of the normal fees that would have been charged for the communication between telephone 1 and telephone 2.

In the afore-described arrangement where the entity providing the advertisement message is made to bear a part or whole of the charges, if the "detailed charging method" which is well known is used in conjunction with the switching method, each call will be identified in terms of the callee and the charge for the call. The itemization can then be used to bill the entity

providing the advertisement message for a part or whole of the charges based on calls to the entity providing the advertisement message and charges for the second dialed call. Furthermore, at the present time, with a call forwarding service, the charges after the transfer are billed to the first callee. Hence, it would be an easy matter to make the entity providing the advertisement message bear all of the communication charges to aforesaid telephone 2.

#### Attachment

FIG. 3 shows a specific example of attachment 4 shown in FIG. 1. 41 and 42 are subscriber lines that are connected to switch 5. 43 is a signal detection circuit; 44 is a control circuit; 45 is a connection circuit; 46 is an automatic answer circuit; and 47 is an automatic dial circuit. It is assumed that the off-hook state (disconnected state) is the initial state for subscriber lines 41 and 42. When the signal detection circuit 43 detects a ringing signal from switch 5 that arrives at subscriber line 41, the signal detection circuit 43 notifies control circuit 44 that subscriber line 41 is ringing. Upon receiving this notice, control circuit 44 controls connection circuit 45 and connects subscriber line 41 to automatic answer circuit 46 and also instructs automatic answer circuit 46 to send a message. Upon receiving this instruction, automatic answer circuit 46 sends an answer signal to switch 5 via subscriber line 41. After confirming that the line is set up, the pre-recorded message is sent over subscriber line 41. When the transmission of the message is completed, a voice instruction to dial a number such as, "Please dial the number of the party you want to call," is sent over subscriber line 41. At the same time, the control circuit 44 is informed that the transmission of the message has ended. Upon receiving the notice that the transmission of the message has been completed, control circuit 44 instructs the signal detection circuit 43 to detect the dial number signal that will be sent from switch 5 over subscriber line 41. The signal detection circuit 43 follows this instruction, and when it detects the dial number signal, it informs control circuit 44.

When the control circuit 44 receives the dial number information from signal detection circuit 43, the control circuit immediately transfers this information to the automatic dial circuit 47 and also controls the connection circuit 45 so that the automatic dial circuit 47 is connected to subscriber line 42. When this connection is established, the automatic dial circuit 47 sends a call origination signal to switch 5 via subscriber line 42. After confirming the answer from switch 5, the automatic dial circuit uses the dial number information received from the control circuit 44 to create a dial signal which is sent over subscriber line 42 and waits for an answer from switch 5. When an answer signal is received from switch 5 over subscriber line 42, the automatic dial circuit notifies control circuit 44 of this. Upon receiving this notice, control circuit 44 controls connection circuit 45 and connects subscriber line 41 and subscriber line 42 and transfers the signal from subscriber 41 to subscriber line 42 and instructs signal detection

circuit 43 to detect a disconnect signal over subscriber lines 41 and 42. Upon receiving this instruction, the signal detection circuit 43 begins monitoring for the disconnect signal. When a disconnect signal is detected over either of the subscriber lines, the signal detection circuit notifies the control circuit 44 of this. Upon receiving this notice, control circuit 44 immediately controls connection circuit 45 so that the connection between subscriber lines 41 and 42 is released. At the same time, both subscriber lines are restored to the initial state.

#### Trunk apparatus

FIG. 4 shows one embodiment of a trunk apparatus 6 shown in FIG. 2. 61 is a trunk line that connects trunk apparatus 6 and the speech path apparatus of switch 5; 62 is a control signal line that connects trunk apparatus 6 and the controller of switch 5; 63 is a connection circuit; 64 is a control circuit; 65 is an automatic answer circuit; and 66 is a dial signal detection circuit. Assume that control circuit 64 is notified over control signal line 62 that telephone 1 is requesting that it be connected to trunk apparatus 6. Control circuit 64 then controls connection circuit 63 so that trunk line 61 is connected to automatic answer circuit 65. At the same time, control circuit 64 instructs automatic answer circuit 65 to send a message. Upon receiving the instruction from control circuit 64, the automatic answer circuit 65 sends the pre-recorded message over trunk line 61. When the transmission of the message is completed, the automatic answer circuit 65 sends a dial instruction voice signal, "Please dial the number of the party you want to call," to trunk line 61. The automatic answer circuit then informs the control circuit 64 that the message has ended.

Upon receiving this notice, the control circuit 64 controls connection circuit 63 and connects trunk line 61 to the dial signal detection circuit 66. At the same time, the control circuit instructs the dial signal detection circuit 66 to detect the dial signal that would be coming over the trunk line 61. In response to this instruction, the dial signal detection circuit 66 detects the dial signal, and when the detection is completed, the number information is provided to control circuit 64. Upon receiving the number information from the dial signal detection circuit 66, the control circuit 64 transmits this information to the controller of switch 5 over control signal line 62 and requests that the connection control operation be started. Thereafter, switch 5 uses its regular switching functions to connect telephone 1 and telephone 2 and establishes a speech path between the two.

Both examples shown in FIG. 3 and FIG. 4 can be easily realized using well known circuit technologies of the prior art.

#### Effects

As clear from the afore-description of the method according to the present invention, in exchange for listening to an advertisement message of a certain duration prior to the start of the originally intended bidirectional communication, the communication charge that is imposed on the caller is reduced from what it would have been in the absence of listening to the advertisement message. For the entity providing the message, whereas with the methods of the prior art, the expected effects on the listeners of the message transmission depended solely on the substance of the message, the method according to the present invention provides the advantage of preserving the message transmission effect in exchange for bearing the charges associated with a bidirectional communication that would have been charged to the caller. In other words, a highly sophisticated message transmission effect is obtained that is not available with a message transmission method of the prior art that uses telephones as an advertisement medium where the message transmission is only unidirectional.

It should be clear that the use of the method according to the present invention is not limited only to telephone communication and that the method can be used with all communication types that are transmitted via telephone switches such as facsimile communication and data communication.

#### 4. Brief Description of the Figures

FIG. 1 is a block diagram providing a simplified description of the operation of the method according to the present invention wherein an attachment that is connected to a telephone set is used. FIG. 2 is a block diagram providing a simplified description of the operation of the method according to the present invention wherein a trunk apparatus of a switch is used. FIG. 3 is a block diagram showing one embodiment of the attachment shown in FIG. 1. FIG. 4 is a block diagram showing one embodiment of the trunk apparatus shown in FIG. 2.

- 1, 2, 3. Telephone set
- 4. Attachment
- 5. Switch
- 6. Trunk apparatus
- 41, 42. Subscriber line
- 43. Signal detection circuit
- 44. Control circuit
- 45. Connection circuit
- 46. Automatic answer circuit
- 47. Automatic dial circuit
- 61. Trunk line

- 62. Control signal line
- 63. Connection circuit
- 64. Control circuit
- 65. Automatic answer circuit
- 66. Dial signal detection circuit

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FIG. 1

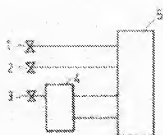


FIG. 2

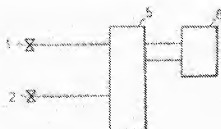


FIG. 3

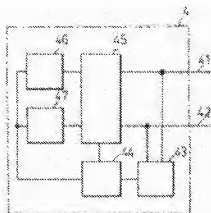


FIG 4

